What is claimed is:

1. A silicon wafer wherein stacking fault nuclei are distributed throughout the entire in-plane direction, and a density of said stacking fault nuclei is set to a range of between $0.5x10^{8}cm^{-3}$ and $1x10^{11}cm^{-3}$.

2. A silicon wafer according to claim 1, which is cut from an ingot formed from a perfect region wherein interstitial silicon-type point defect agglomerates and vacancy-type point defect agglomerates are practically non-existent.

3. A silicon wafer according to claim 1, which is cut from an ingot formed from a region wherein vacancy-type point defects are dominant.

4. A manufacturing method of a silicon wafer wherein an ingot pulled from a silicon melt in a crucible in accordance with the Czochralski method is sliced to manufacture the silicon wafer according to claim 1,

wherein said ingot is pulled such that a ratio V/G of, a rate V at which the ingot is pulled, and a temperature gradient G of the ingot in the vertical direction in the vicinity of an interface between the silicon melt in the crucible and the ingot, is between $0.20mm^{2}/°C·minute$ and $0.25mm^{2}/°C·minute$.

5. A manufacturing method of a silicon wafer wherein an ingot pulled from a silicon melt in a crucible in accordance with the Czochralski method is sliced to manufacture the silicon wafer according to claim 1,

wherein nitrogen is added while pulling said ingot, to set an internal nitrogen

concentration within a range of between $5x10^{14}cm^{-3}$ and $5x10^{15}cm^{-3}$.

6. A manufacturing method of a silicon wafer which manufactures the silicon wafer according to claim 1, comprising:

a vacancy heat treatment step for forming new vacancies in the interior by means of a heat treatment of said silicon wafer in an atmosphere gas containing nitrogen; and

an SF nuclei heat treatment step which agglomerates interstitial silicon released during precipitation of oxygen from vacancies injected by said vacancy heat treatment step, to form stacking fault nuclei,

and a temperature in said SF nuclei heat treatment step is above 1100°C, and is increased at a rate of not more than 10°C/minute.

7. A manufacturing method of a silicon wafer according to claim 6, wherein an oxide film on the surface of said silicon wafer is previously removed, prior to said vacancy heat treatment step.

8. A manufacturing method of a silicon wafer according to claim 6, wherein during said vacancy heat treatment step, purging is conducted to remove oxygen from the atmosphere gas surrounding said silicon wafer, and said silicon wafer is quenched after said vacancy heat treatment step.

9. A manufacturing method of a silicon wafer comprising a step of heat treating to the silicon wafer according to one of claims 1 and 2, or, to the silicon wafer manufactured by the manufacturing method of a silicon wafer according to any one of

claims 3 to 8, to form at least a defect-free layer on the surface of said silicon wafer.

10. A silicon wafer manufactured by the manufacturing method of a silicon wafer according to claim 9.

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